

PROCEEDINGS OF THE ENTOMOLOGICAL SOCIETY OF AMERICA.

Washington Meeting.

The sixth annual meeting of the Entomological Society of America was called to order by President Herbert Osborn at 10:00 a. m., Tuesday, December 26, in Room 376 of the new U. S. National Museum building. The following committees, appointed previous to the meeting, reported:

Committee to draft resolutions on the death of Dr. Henry Christopher McCook—Henry Skinner, P. P. Calvert, Henry L. Vierick. Report accepted and ordered printed.

Committee to draft resolutions on the death of D. W. Coquillett—Nathan Banks, C. W. Johnson, J. S. Hine. Report accepted and ordered printed.

The chair was directed by motion to appoint the following committees: Committee on Resolutions; Committee on Nominations; Auditing Committee.

The following papers were read, of which abstracts are given for those not to appear in the ANNALS:

Herbert Osborn. *Faunistic studies in entomology*. (Printed in this number of ANNALS).

E. P. Felt. *Numerals as aids in classification*. The habitual use of numbers in catalogues indicates utility. A modified system of decimal notation is adapted to the needs of naturalists, while additions require little change. A general agreement upon the numbers for the major zoological division is suggested prior to the application of the system by cataloguers and other general workers.

E. S. Tucker. *Studies of insects bred and collected from the American mistletoe*. Presented by Andrew Rutherford—By the name of "American mistletoe", the species *Phoradendron flavescens* Nuttall and its several varieties is meant. Two snout-beetles belonging to the same group as the cotton boll-weevil were bred from terminal enlargements of the stem. From the larvæ of one of these beetles five hymenopterous parasites were bred, all of which attack the larvæ of the cotton boll-weevil. About sixty species in all were obtained.

H. C. Severin. *The influence of temperature on the moulting of the walking-stick, Diaperomera femorata*. Read by title.

The president announced the following committees:

Committee on Resolutions—E. P. Felt, E. D. Ball, and R. A. Cooley.

Committee on Nominations—C. W. Johnson, J. G. Sanders, and H. E. Summers.

Auditing Committee—Henry Skinner, J. H. Comstock, and A. D. Hopkins.

The society then adjourned to meet at 1:30 p. m. Upon reconvening, the following papers were read:

R. Matheson and C. R. Crosby. *Notes on aquatic Hymenoptera*. Illustrated. Presented by C. R. Crosby. (Printed in this number of ANNALS).

Ann H. Morgan. *Photographs illustrating the life histories of May-flies*. Illustrated. Photographs were shown which illustrated the life history and biology of about twenty-five May-flies. Both nymphs and adults were photographed alive; the nymphs in a solution of chloretone, the adults without anæsthetic. Nymphs representing the main biological groups were shown and their habitat described. Imagoes and sub-imagoes of certain genera were shown and their structure and characteristic postures noted.

H. Y. Tsou. *The Chinese wax-scale, Ericerus pe-la*. Illustrated. One of the most beneficial insects of the family Coccidæ has been domesticated by the ancients of the Chinese people for the wax which it produces. This paper consists of (a) correction of errors of European translation from Chinese works; (b) additional statements on the life history of the insect; (c) method of propagating this insect; (d) division of labor in carrying on this industry among the people of different localities, so that the eggs of the insect are produced in the northern district and the wax in the southern district; (e) importance of this industry; and (f) use of the wax.

A. D. MacGillivray. *The lacinia in the maxilla of the Hymenoptera*. Illustrated. (To be printed in the ANNALS.)

Lucy Wright Smith. *Glycogen in insects, especially in the nervous system and the eyes*. Illustrated. In a heterogeneous lot of insects, including representatives of seven orders, glycogen has been found: (1) in immature and adult stages (a) in the crystalline cells of compound eyes, (b) in the crystalline and retinal cells of simple eyes, (c) in the neurilemma; (2) in immature stages only, (a) in the cells of ganglia in all parts of the body. No glycogen has been found in nerve fibers.

J. A. Nelson. *Note on an abnormal queen-bee.* Illustrated. This queen was originally sent from Grand Bay, B. W. I. When received she was alive and quite active. It was planned to introduce her into a hive to test her fertility, but she died by accident before this was done. The dead queen appeared normal in structure with the exception of the abdomen, which was ovoid in shape, instead of conical as in the normal queen; it was also flexed strongly ventrad at the apex, which had consequently a blunt appearance, like that of the abdomen of the drone. The sternites of the 5th and 6th abdominal segments were unusually broad and somewhat asymmetrical, as was also the sternite of the 4th segment. The sternite of the 7th segment was the most modified of all, being greatly shortened in the longitudinal axis, and almost concealed by the sternite of the preceding segment. The notch on its posterior border was abnormally broad and deep. The sting had a slight kink midway of its length.

The internal organs were apparently normal with the exception of the genital organs. The left ovary and oviduct were entirely wanting. The right oviduct and ovary were present, but the latter appeared to possess only a single egg tube. The spermatheca was empty. The bursa copulatrix was also shortened in the longitudinal axis so that the external openings of the spermatheca and the poison glands were brought close together. No characters suggestive of hermaphroditism were found. The cause of the abnormalities is unknown.

J. Chester Bradley. *The designation of the venation of the hymenopterous wing.* Illustrated. In the higher Hymenoptera, owing to certain remarkable conditions that prevail, the full application of the Comstock-Needham system of venation becomes a very complex matter. This is especially true in the case of the hind wings. By certain simple abbreviations this complexity is avoided, and the system becomes quite conveniently usable for taxonomic purposes.

Ann H. Morgan. *Homologies in the wing-veins of May-flies.* Illustrated. (To be printed in the ANNALS).

A. D. MacGillivray. *The pupal wings of *Ilepialus thule*.* Illustrated. (To be printed in the ANNALS).

J. Chester Bradley. *The wing venation of Chalcid flies.* Illustrated. The hymenopterous family Chalcididæ present a uniform excessive reduction in the number of their wing veins

which is approached elsewhere in the Hymenoptera only by certain Proctotrypidæ and Evaniidæ. This depletion is the result of a degenerative tendency that is manifest wherever there is considerable reduction in the size of the wasp. It is of interest to ascertain with what veins of other Hymenoptera the vein remnants in the Chalcid wing are homologous.

The so-called marginal vein is in reality the elongated stigma, the "post-marginal" is r and R_1 and usually bears on its anterior margin a spur of the base of R_3 .

Leucospis is our most generalized group of Chalcididæ so far as its wings are concerned. The wings of Chalcididæ show a close relation to those of Cynipidæ through *Leucospis* in the one group and *Ibalia* in the other.

On motion of Dr. E. P. Felt, the Secretary was instructed to send a message of sympathy and greeting to Dr. John B. Smith.

The society adjourned at 4:30 p. m., to meet Wednesday, December 27, at 10:00 a. m.

The annual business meeting was held by the society upon reconvening, and the following reports were presented:

The report of the Committee on Nomenclature was presented by Dr. H. T. Fernald. The report was ordered accepted and printed.

REPORT OF THE COMMITTEE ON NOMENCLATURE.

There have been no specific problems brought to the attention of your committee during the past year. The recommendations and suggestions submitted by the committee a year ago, are still before the Society, and we would suggest that they should come up for discussion and be voted upon. During the year various proposals for the reform of nomenclatorial practice have been discussed in public and private. One writer proposes a system of numbers to take the place of specific names. In another quarter there is a disposition to propose an entomological code to be independent of the international code of zoological nomenclature. Your committee is strongly of the opinion that the international code should be followed by all entomologists and is herein in hearty accord with the attitude of the last International Entomological Congress. It is desirable to determine the attitude of American entomologists on this important matter, and we would suggest that the question be discussed and voted upon at this meeting. It is to be observed that the adoption of the international code does not prevent entomologists from formulating and urging upon the zoological committee and congress, amendments designed to remove existing ambiguities and difficulties.

The question of *nomina conservanda* is now being discussed by the zoological committee and by zoologists generally. It is one which should not be lightly settled one way or the other, and we commend the matter to the society for discussion.

It is to be remarked that conformity with proper usages in writing and publishing would reduce the number of nomenclatorial problems, and it is a question (not wholly within the scope of your committee) whether the society should not formulate and adopt rules for the guidance of its members.

Respectfully submitted.

E. P. FELT,

H. T. FERNALD,

THEO. D. A. COCKERELL,

Committee.

Dr. H. T. Fernald also presented the following separate report prepared by Professor T. D. A. Cockerell, with which the other members of the Committee did not concur. It was ordered accepted and printed. This report was as follows:

REPORT PRESENTED BY PROFESSOR T. D. A. COCKERELL.

When a long-forgotten or ignored type-designation is found to seriously disturb the status of a well-known genus, the International Committee may *arbitrarily* select a type from among the originally included species, in such manner as to retain the generic name with its customary significance; Provided, that such designation be published six months before the next congress, and voted upon in open meeting at the congress.

This was especially suggested by the discovery that apparently, by strict application of the type-designation rule, *Colletes* must be called *Andrena*, with resulting confusion awful to contemplate.

The Committee on Resolutions presented the following report:

REPORT OF THE COMMITTEE ON RESOLUTIONS.

WHEREAS, The types of insect genera and species must of necessity be the basis of all future taxonomic work; and

WHEREAS, There is no general uniformity in the selection, labeling, and disposition of types among American entomologists and institutions; neither is there any uniformity of practice among custodians of types in reference to their availability for study; therefore, be it

Resolved, That a special committee of three be appointed to investigate the matter and others of similar import and make suitable recommendations at a subsequent meeting; and be it further

Resolved, That we express to the authorities of the United States National Museum and those of the Cosmos Club our deep appreciation of the many courtesies extended this organization.

Resolved, That we commend the editorial management of the ANNALS of the Entomological Society of America and hereby express our sense of great obligation to Professor Osborn for his part in the undertaking.

Respectfully submitted,

E. P. FELT,
E. D. BALL,
R. A. COOLEY.

Committee.

The Committee on Nominations presented the following list of officers for 1912:

President, S. A. Forbes.
1st Vice-President, A. D. Hopkins.
2d Vice-President, C. P. Gillette.
Secretary-Treasurer, A. D. MacGillivray.

Additional Members of Executive Committee, J. H. Comstock, John B. Smith, Henry Skinner, Herbert Osborn, E. D. Ball, P. P. Calvert.

Member of Committee on Nomenclature for three years, H. T. Fernald.

Respectfully submitted,

C. W. JOHNSON,
J. G. SANDERS,
H. E. SUMMERS.

Committee.

On motion, the secretary was instructed to cast a single ballot for the officers named. They were declared elected.

The Committee to Draft Resolutions on the death of Henry Ulke, consisting of A. D. Hopkins, E. A. Schwarz, and L. O. Howard, reported. The report was accepted and ordered printed.

The Committee to Draft Resolutions on the death of Samuel Hubbard Scudder, consisting of W. J. Holland and C. J. S. Bethune, were not in attendance. It was ordered that these resolutions be filed with the secretary and be included in the minutes.

The secretary presented the following report for the Executive Committee, which met at the Cosmos Club Tuesday evening, December 26:

REPORT OF THE EXECUTIVE COMMITTEE.

The following have died during the year:

Coquillet, D. W.	Ulke, Henry.
McCook, H. C.	Weems, Mrs. R. A. D.
Scudder, S. H.	

The following new members were elected by the Executive Committee in June, 1911:

Barrows, W. M.	Smith, Miss Lucy W.
Crampton, G. C.	Tsou, Y. H.
Rutherford, A.	Wallis, J. B.
Sherman, J. D., Jr.	

The following new members were elected by the Executive Committee last evening:

Baker, A. C.	Knight, H. H.
Carmody, Miss Mary.	McIndoo, N. E.
Ely, C. R.	Peterson, Alvah.
Fracker, S. B.	Ruth, W. A.
Funkhouser, W. D.	Sanford, H. L.
Glasgow, Hugh.	Timberlake, P. H.
Glasgow, R. D.	Urbahns, T. D.
Illingworth, J. F.	Varrelman, F. A.
Jobbins-Pomeroy, A. W.	Williamson, W.
King, Vernon.	

The following resignations were accepted and their membership terminated:

Adams, C. F.	McCray, A. H.
Bowditch, F. C.	Montgomery, C. E.
Brooks, Theo.	Murtfeldt, Miss M. E.
Brown, T. E.	Sala, August.
Denton, W. D.	Saunders, Dr. Wm.
Devereaux, W. L.	Slater, Miss F. W.
Frost, H. L.	Smith, H. G.
Hart, W. O.	Strong, W. O.
Hitchings, E. F.	Walton, W. R.
Lovell, J. H.	

The secretary presented a list of twenty names of persons who had been dropped by the secretary for non-payment of dues for two years.

The following recommendations were offered:

That members dropped for non-payment of dues shall be required to pay the full subscription rate, three dollars, during the full period of their retirement, in case they wish the *ANNALS*.

That members who have been dropped for non-payment of dues shall only be eligible for re-election to the society on payment of dues at time they were dropped.

That the Secretary-Treasurer and Professor J. H. Comstock be appointed a committee to deposit the fees of life members in a bank that they consider safe at a good rate of interest.

That the interest on fees of life members be considered an income.

That the Editor of the *ANNALS* be empowered to get the necessary clerical help that he needs in getting out the *ANNALS*.

That the publications presented to the Society by Dr. S. H. Scudder be sold and the net proceeds be added to the permanent fund.

The following amendments and additions to the By-Laws were recommended:

To amend By-Law 1, which now reads, "The annual dues for members and fellows shall be one dollar," to read:

1. The annual dues for members and fellows shall be two dollars; this includes a subscription to the ANNALS of the Entomological Society of America.

The following additional By-Laws:

7. Members two years in arrears shall be dropped from the rolls by the secretary after twenty days notice.

8. A member elected shall not be in good standing until he pays his first year's dues. In case he shall not have made such payment at the expiration of one year from the date of his election, he shall be dropped from the roll by the secretary after twenty day's notice.

9. The ANNALS of the Entomological Society of America will not be mailed to any fellow or member whose dues and subscription are not paid on or before March 1.*

The Treasurer presented the following report:

Balance forward.....	\$ 252.49
Life membership fees.....	100.00
Cash received from Herbert Osborn.....	179.56
Cash collected as dues.....	1,004.84
Interest on fees of life members.....	5.75
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	\$1,542.64
Bills paid.....	740.21
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	\$ 802.43
Life membership fees and interest on same to July 1, 1911, deposited in Rothschild Bros. Savings Bank, Ithaca, N. Y., at 4%.....	\$105.75
Cash deposited to the credit of the Society in the First National Bank of Champaign, Ill.....	696.60
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	\$ 802.35

On motion, the report of the Executive Committee was adopted.

The Secretary called attention to the fact that certain amendments to the Constitution, recommended to the Society at the Boston meeting, had not been acted upon at the Minneapolis meeting. These were ordered read:

Article IV. Section 1. The officers of this Society shall be a President, two Vice-Presidents, and a Secretary-Treasurer. The duties of these officers shall be those usually pertaining to their respective offices.

*The wording of this By-Law as submitted at Washington is ambiguous. The following wording was submitted to the Executive Committee and by them adopted:

9. The ANNALS of the Entomological Society of America will not be mailed to any fellow or member whose dues are in arrears. All dues are payable December 1st, and should be received not later than March 1st.

To be amended to read:

Section 1. The officers of this Society shall be a President, two Vice-Presidents, a Secretary, and a Treasurer, but these two last offices may be held by the same person. Adopted.

Article IV. Section 2. The business of the Society not otherwise provided for shall be in the hands of an Executive Committee consisting of the officers named in Section 1, and of six additional members, who shall be elected from the Fellows of the Society. Four members of the committee shall constitute a quorum.

To be amended to read:

Section 2. The business of the Society not otherwise provided for shall be in the hands of an Executive Committee, consisting of the officers named in Section 1, and of six additional members, five of whom shall be elected from the Fellows by the Society, and the sixth shall be *ex officio* the Managing Editor. Four members of the Committee shall constitute a quorum. Adopted.

Article IV. Section 3. The President shall represent the Society upon the Council of the American Association for the Advancement of Science until such time as the Society shall be qualified for representation by two councillors, in which case the second councillor shall be elected from the fellows by the Executive Committee.

To be amended to read:

Section 3. Councillors to the American Association. The President and the preceding Past-President shall represent the Society upon the Council of the American Association for the Advancement of Science.

Referred back to the Executive Committee for further consideration.

The Managing Editor of the ANNALS presented his report, which was accepted. The editor pointed out the flourishing condition of the ANNALS, that the present volume would contain over five hundred pages, and that the number of societies and libraries subscribing was increasing each year.

Dr. Henry Skinner, the delegate of the Society to the First International Entomological Congress, held in Brussels, August 3-6, 1910, presented the following statement:

The First International Entomological Congress was held in Brussels August 3 to 6, 1910, and was very successful, about 137 members and 32 ladies—wives of members—being

present. (There were in all 270 memberships, which number includes museums, universities, and other scientific societies.) The memoirs of the First Congress have appeared, with 41 papers and 520 pages. There were but three persons present from the United States, and one from Canada. It is to be hoped that Americans will take greater interest in the next congress, which will be held in Oxford, England, this year from the fifth to the tenth of August. It promises to be even more successful and interesting than the first, and will afford an unusual opportunity for American entomologists to meet their European brothers under pleasant circumstances. It will also enable them to visit the various museums of England, and the continent, if they so desire. Anybody who takes an interest in any branch of entomology, scientific or applied, may become a member of the Congress. The membership fee will be five dollars. The expense of going to Oxford may be made small or great, according to the tastes or the comparative finances of the individuals attending. The study of entomology has become of very great importance to the world, and the first congress attracted much attention and favorable comment. The advance of entomology in America has been very great, and it is the duty of American entomologists to help advance the study throughout the world, and this they can do by aiding in the work of the next entomological congress.

Dr. P. P. Calvert moved the following resolution, which was seconded by Professor J. H. Comstock:

That the Entomological Society of America strongly recommend to the Second International Entomological Congress the preparation of lists of *nomina conservanda* in the various groups of insects, such names to be adopted irrespective of the strict rule of priority.

This resolution was discussed by Messrs. A. N. Caudell, W. D. Pierce, E. P. Felt, and P. P. Calvert. The motion was lost, 16 affirmative and 31 negative.

The auditing Committee presented the following report, which was adopted:

REPORT OF AUDITING COMMITTEE.

The Auditing Committee examined the accounts of the Secretary-Treasurer, and found them correct, in accordance with the appended report.

Respectfully submitted,

HENRY SKINNER,
A. D. HOPKINS,
J. H. COMSTOCK,

Committee.

The following resolution was introduced by Dr. E. P. Felt:

That the Entomological Society of America place itself on record in favor of delegate action at the International Congress of Entomology. Adopted.

It was then moved by Dr. J. Chester Bradley that the report of the Committee on Nomenclature presented at the Minneapolis meeting be taken up, section by section, at this time, for action. Adopted. (This report was printed in the ANNALS, Vol. IV, pp. 89-91. The sections refer to the numbered parts beginning near the bottom of page 90.) Section 1 was read and adopted. Section 2 was read, discussed by Messrs. Banks and Rehn, and on motion the Society passed to the consideration of Section 3. Section 3 was read, and after considerable discussion was ordered laid on the table for one year.

The following papers were then read:

F. M. Webster. *Our present educational system in relation to the training of economic entomologists.* The demand for trained men capable of engaging in entomological work has increased greatly, but the graduates of the colleges generally are not sufficiently equipped for such work and must have a special training of one to two years before they are available. The author wishes to emphasize the necessity for training in related sciences, in modern languages, and especially in field observation in entomology. The student intending to be an entomologist should begin in his first year with field observations and should be required to gather his own material for study. It would be especially desirable that students training for entomological work should have an experience at least during their vacations in work in some experiment station, and this sort of work should very properly be given credit in the college or university as part of the requirements leading to a degree.

C. W. Johnson. *The use of color in designating types and varieties.* Colored labels for types are being carried to an extreme. At the last meeting of the Cambridge Entomological Club one of our members who makes a specialty of printing labels for entomologists, asked me "what is an allotype, a homotype, a metotype, an autotype, and a topotype, and why don't they use the same color for the same kind of a type? One wants his paratype on light green, another on pink, and a third on brown. Why I can't get enough colors to go around."

An energetic collector with time and money at his disposal can make some sort of a type out of seventy-five percent of his species. These various types may have some value, but they can not always be depended upon. A great number of colors used indiscriminately is very confusing, for there are equally important features that might be designated by color, aside from manufactured types. Colors could be used to advantage to indicate abnormalities, especially today when the experimental biologist is after data as to the number and kinds of abnormalities that occur in specimens in nature. Such specimens are completely overlooked unless they are marked in some way. Not more than two colors should be used for types, red, for the primary, and green, for supplementary types. Then another color, yellow, for instance, could be used for abnormalities.

Herbert Osborn. *A problem in the flight of insects.* (Printed in this number of ANNALS.)

E. P. Felt. *The biology of Miaster and Oligarces.* The widely distributed *Miaster* larvæ reproduce by pædogenesis in the moist, decaying bark of various trees during fall and spring, midges appearing from June till August. A larval generation occupies 3 to 3½ weeks. *Oligarces* is less common than *Miaster*. Both are subject to attack by a number of natural enemies.

Leonard Haseman. *Entomological work in Missouri.* Since the early masterly work of Dr. C. V. Riley, the entomological needs of Missouri have not been properly served. Every line of entomological work is open for study. This department is investigating the more urgent insect problems of Missouri, though it is much handicapped by lack of assistance. The work connected with the instruction, station, nursery inspection, and duties of State Entomologist is more than the present staff can properly handle.

W. L. W. Field. *Hybrid butterflies of the Genus Basilarchia.* Since the Boston meeting two years ago, considerable progress has been made in the experiments with the supposedly hybrid *Basilarchias*, *B. prosperpina* Edw. and *B. arthechippus* Scud. Their hybrid nature has now been proven by breeding experiments. The data obtained also support the conclusions drawn from earlier experiments, to the effect that in *proserpina* the black of *astyanax* is incompletely but uniformly dominant over the white-banded condition of *arthemis*.

O. A. Johannsen. *Cocoon making of Bucculatrix canadensisella*. Read by title.

J. G. Needham. *Some adaptive features of myrmecoleonid venation*. Read by title.

E. H. Strickland. *The Pesomachini of North America*. Read by title.

P. P. Calvert. *Seasonal collecting in Costa Rica*. Read by title.

Z. P. Metcalf. *Homologies of the wings veins of Homoptera Auchenorhynchi*. Read by title.

On motion, the President was authorized to name a committee of three on types, as suggested in the report of the Committee on Resolutions, this committee to report at the next annual meeting.

The following committee was named: T. D. A. Cockerell, Henry Skinner, and L. O. Howard.

On motion, the Society adjourned to meet in one year with the American Association for the Advancement of Science at Cleveland, Ohio.

Since the Washington meeting:

The President has named John B. Smith, L. O. Howard, E. P. Felt, W. E. Britton, and W. M. Wheeler, to represent the Society as delegates to the Centennial of the Academy of Natural Science of Philadelphia, Pennsylvania, held Tuesday, Wednesday, and Thursday, the 19th, 20th, and 21st of March, 1912.

The Executive Committee has named Herbert Osborn as the additional Councillor of the American Association for the Advancement of Science.

The Executive Committee has named the following delegates to the Second International Congress of Entomologists, to be held at Oxford, England, August 5th to 10th, 1912: Herbert Osborn, P. P. Calvert, Henry Skinner, J. H. Comstock, Vernon L. Kellogg, W. J. Holland.

ALEX. D. MACGILLIVRAY,
Secretary.

The Society is indebted to *Psyche* for the use of the plate of Dr. Scudder, and to *Entomological News* for the plate of Dr. McCook.—[EDS.]